Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHIYUKI NAKANO

Appeal No. 2001-2371
Application 09/318,259

ON BRIEF

Before MCQUADE, NASE, and BAHR, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Yoshiyuki Nakano appeals from the final rejection of claims 7 through 10, all of the claims pending in the application.

THE INVENTION

The invention relates to "an inflator for inflating an airbag which is installed in a vehicle including an automobile and, more particularly, to an inflator which generates gases in multiple stages" (specification, page 1). Representative claim 7 reads as follows:

7. An inflator comprising:
a cylindrical casing,
a partition situated in the casing to be offset from a middle in a longitudinal direction of the casing to one end side of the casing so that the casing has a first chamber on the one end side and a second chamber on the other end side,
a gas generant filled in the first and second chambers for generating gases,
first holes formed in the casing only near the partition to communicate with the first chamber so that when the gas generant in the first chamber is ignited, a gas is ejected through the first holes near the partition to inflate the airbag as equal as possible in the longitudinal direction, and
second holes formed in the casing only at the middle in the longitudinal direction of the casing to communicate with the second chamber so that when the gas generant in the second chamber is ignited, a gas is ejected through the second holes at the middle of the casing to equally inflate the airbag in the longitudinal direction.

THE PRIOR ART

The references relied on by the examiner to support the final rejection are:

Powell et al. (Powell) 9-136604 May 27, 1997 (Japanese Patent Document[1])

"Variable Output Pyrotechnic Air Bag Inflator," 2244 Research Disclosure, No. 379, November 1995 (Research)

THE REJECTIONS

[1] An English language translation of this reference, prepared on behalf of the United States Patent and Trademark Office, is appended hereto.

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Japanese reference.

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Japanese reference in view of the Research reference.

Attention is directed to the appellant's brief (Paper No. 12) and to the examiner's final rejection and answer (Paper Nos. 8 and 13) for the respective positions of the appellant and the examiner with regard to the merits of these rejections.

DISCUSSION

I. The 35 U.S.C. § 103(a) rejection of claims 7 and 8

The Japanese reference discloses a gas generator for inflating an automobile airbag. In the Figure 1 embodiment focused on by the examiner, the generator 1 comprises first and second combustion chamber units 10 and 20 which are separated by a common combination piece 3 and disposed within a common filter case 2. Each combustion chamber unit includes an electric ignition device 11, 21, a combustion chamber 13, 23, and tablet-shaped fuel 15, 25. The common filter case 2

contains blow-out openings 4 located over the respective lengths of the combustion chamber units for releasing the gas generated therein.

It is not disputed that the filter case 2, the combination piece 3, the combustion chambers 13, 23, and the tablet-shaped fuel 15, 25 disclosed by the Japanese reference respond to the limitations in claim 7 relating to the cylindrical casing, the offset partition, the first and second chambers, and the gas generant, respectively, or that the blow-out openings 4 disclosed by the Japanese reference correspond generally to the first and second holes recited in claim 7. At issue is whether the Japanese reference teaches or would have suggested an inflator having holes positioned as required by the claim. As indicated above, claim 7 calls for the first holes to be "formed in the casing only near the partition to communicate with the first chamber so that when the gas generant in the first chamber is ignited, a gas is ejected through the first holes near the partition to inflate the airbag as equal as possible in the longitudinal direction," and the second holes to be

> formed in the casing only at the middle in the longitudinal direction of the casing to communicate with the second chamber so that when the gas generant in the second chamber is ignited, a gas is ejected through the second holes at the middle of the casing to equally inflate the airbag in the longitudinal direction.

In the final rejection, the examiner takes the view that the Japanese reference does not disclose holes positioned "only" near the partition for the first chamber and "only" at the middle of the casing for the second chamber, and concludes that

> [i]t would have been an obvious matter of design choice to have holes on the casing only in one specific area for each chamber, since applicant has not disclose[d] [that] having holes only in one area of the casing solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with holes in the entire length of the casing.
>
> It would have been obvious to one having ordinary skill in the art at the time the invention was made to have holes only on one area of the length of the casing, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, [181 F.2d 1019,] 86 USPQ 70 [(CCPA 1950)] [final rejection, page 2].

In the answer (see pages 3 and 4), the examiner advances the seemingly contradictory viewpoint that, due to the "comprising" transition phrase employed therein, claim 7 does

not exclude the holes (blow-out openings 4) in the Japanese casing (filter case 2) which are positioned other than near the partition for the first chamber and at the middle of the casing for the second chamber.

A fair reading of the appellant's specification and claims, however, refutes all aspects of the examiner's position.

To begin with, although the scope of a claim containing an open transition phrase such as "comprising" may cover subject matter having additional unrecited elements (see AFG Industries Inc. v. Cardinal IG Co., 239 F.3d 1239, 1244, 57 USPQ2d 1776, 1780 (Fed. Cir. 2001)), claim 7, read in context and in light of the specification, does exclude the holes in the Japanese casing which admittedly are not positioned near the partition for the first chamber and at the middle of the casing for the second chamber. In addition to including the restrictive term "only" to define the holes and their position, claim 7 requires the holes recited therein to inflate the airbag equally, or as equal as possible, in the longitudinal direction of the casing. As discussed in the appellant's specification (see pages 1 and 2), in an account

unchallenged by the examiner, the Japanese inflator, with holes disposed throughout the length of its casing, does not operate to inflate the airbag equally, or as equal as possible, in the longitudinal direction of the casing. Indeed, the appellant's specification indicates that the hole locations recited in claim 7 are specifically intended to solve the problem of unequal airbag inflation in the Japanese inflator. Thus, when read in context and in light of the specification, claim 7 cannot reasonably be construed as covering holes which are not positioned "only" near the partition for the first chamber and "only" at the middle of the casing for the second chamber.

Furthermore, the discussion in the appellant's specification of the problems posed by the Japanese inflator and the manner in which the claimed invention solves these problems impeaches the examiner's assertions that the hole positions recited in claim 7 are not disclosed as solving a stated problem or as serving any particular purpose, and that

the invention would perform equally well with holes throughout the entire length of the casing. As these assertions form the basis for the examiner's conclusion that the hole positions recited in claim 7 would have been an obvious matter of design choice, such conclusion has no merit. In the same vein, the discussion in the appellant's specification of the problem solved by the appellant's invention and the lack of any appreciation in the Japanese reference of such problem undermine the examiner's conclusion that the recited hole positions involve a mere rearrangement of parts involving routine skill in the art.

Hence, the disclosure of the Japanese reference does not warrant a conclusion that the differences between the subject matter recited in claim 7 and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 7, and claim 8 which depends therefrom, as being unpatentable over the Japanese reference.

II. The 35 U.S.C. § 103(a) rejection of claims 9 and 10

Independent claim 9 recites an airbag device comprising an elongated container, an airbag folded and accommodated in the container, and an inflator for inflating the airbag. The inflator limitations in claim 9 are identical to those in claim 7.

Because the Japanese reference does not teach such a combination, the examiner relies on the disclosure by the Research reference of an airbag device to conclude that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the inflator of the Japanese patent with the air bag device of the research document" (final rejection, page 3). While this conclusion is reasonable on its face and has not been disputed by the appellant, the Research reference does not cure the above noted deficiencies of the Japanese reference with respect to the inflator hole limitations. Thus, the combined teachings of the Japanese and Research references do not support a conclusion of obviousness with respect to the subject matter recited in claim 9.

Accordingly, we shall not sustain the standing 35 U.S.C.

§ 103(a) rejection of claim 9, and claim 10 which depends therefrom, as being unpatentable over the Japanese reference in view of the Research reference.

SUMMARY

The decision of the examiner to reject claims 7 through 10 is reversed.

REVERSED

JOHN P. MCQUADE Administrative Patent Judge	)	
	)	BOARD OF PATENT
	)	APPEALS AND
JEFFREY V. NASE Administrative Patent Judge	)	INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)	

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